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For the use of aviators and for viewing the flights of airships

The best of all is the

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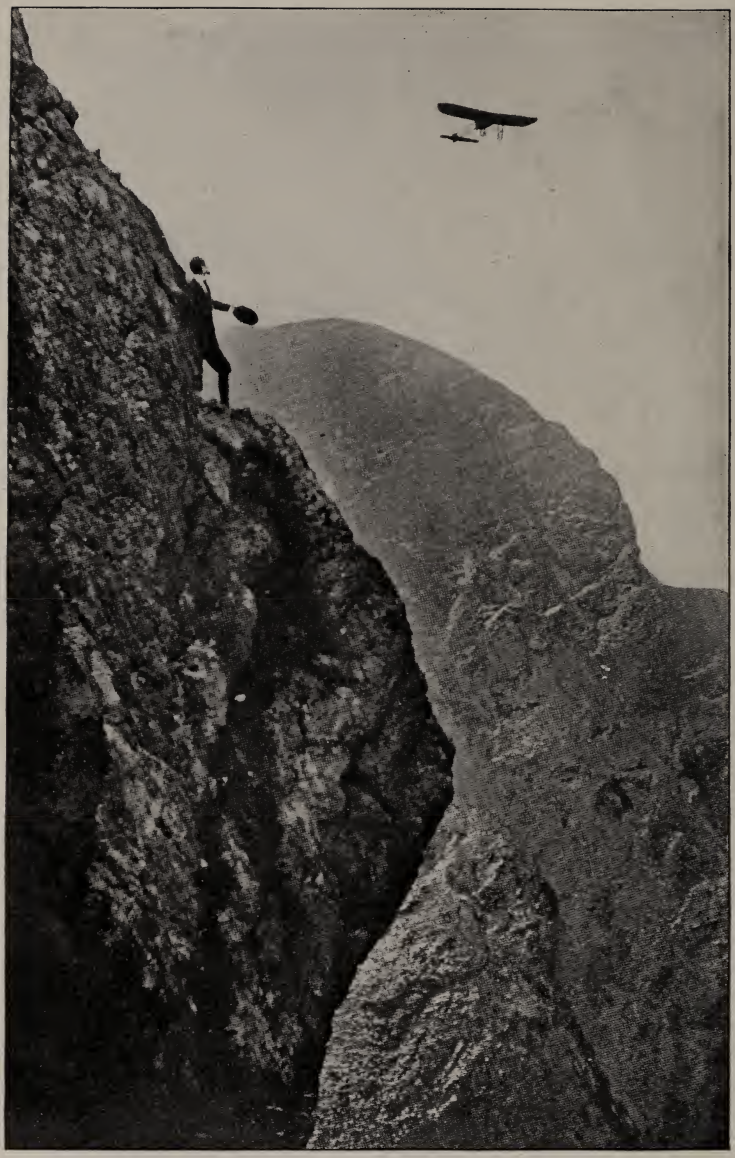
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BOSTON



VEDRINES OVER THE PYRENEES

HARVARD–BOSTON
AERO MEET

August 26 to September 4, 1911



GIVEN UNDER THE SANCTION OF
THE AERO CLUB of AMERICA AND
UNDER THE REGULATIONS of THE
FEDERATION AERONAUTIQUE
INTERNATIONALE

Harvard Aviation Field
Atlantic, Massachusetts

Officers of Meet

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Adams D. Claflin

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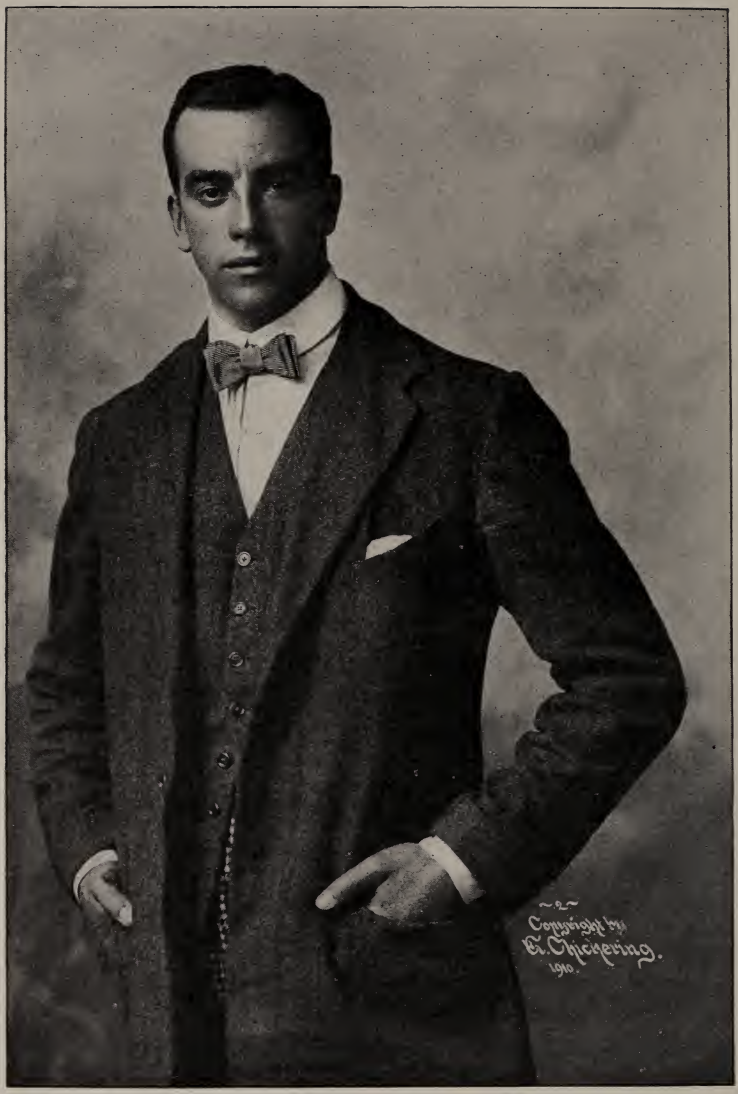
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Medical Staff

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The Matheson Car has been selected as the Official Press Car during the meet.



CLAUDE GRAHAME-WHITE

Winner *Boston Globe* Prize, 1910 Winner Gordon-Bennett Cup, 1910

International Champion, 1910

The Story *of* the Flying Machine

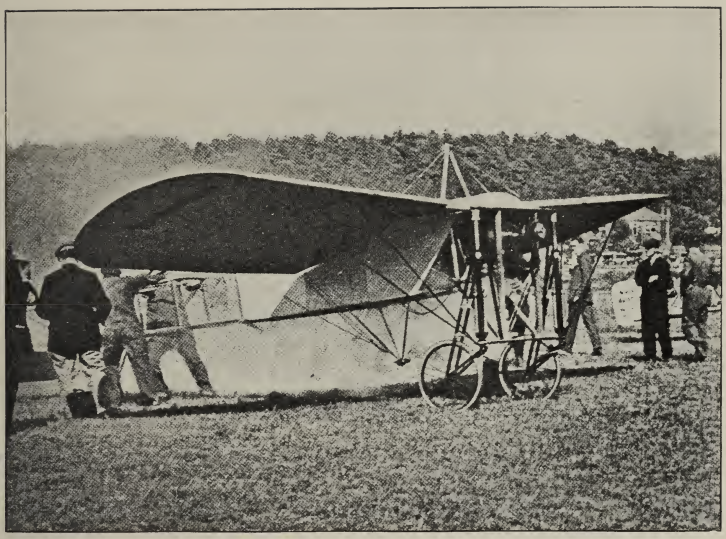
For generations men have tried to fly. Numberless inventors have given their time, money, and lives in the endeavor to make a machine which would transport them safely through the air, but it remained for our own time and generation to solve this problem.

How does it happen that this is so? As long ago as the fifteenth century, Leonardo da Vinci, that great artist, scholar, and scientist, wrote about aviation and experimented with flying models and was himself better posted upon the true theory of flight than many, perhaps most, of the expert operators of to-day; but he lived before the age of machinery, at a time when it was impossible to build a machine sufficiently strong for its size and weight to withstand the strains to which the air would subject it. Like all geniuses, he was ahead of his time. The nineteenth century saw the development of the steam engine and the growth of machinery of all kinds, and this development made it possible to construct surfaces sufficiently strong for their weight to answer the purpose of a flying machine. Thus man-flight could not have preceded that material development introduced with steam. Two problems remained to be solved, — the problem of power and the problem of stability.

Until Professor Langley published his work on aerodynamics, the world in general, and engineers in particular, held that the power necessary for continuous flight was so great that no engine could be made strong enough for its weight to satisfy the conditions. This Professor Langley showed to be false by raising into the air much more than fifty pounds with the expenditure of one horse-power. These experiments of Langley's mark an epoch in the history of flight, and their immediate result was to turn the attention of engineers to this problem.



CHARLES T. WEYMAN, International Champion
Winner of Gordon-Bennett Cup, 1911



BLERIOT MACHINE

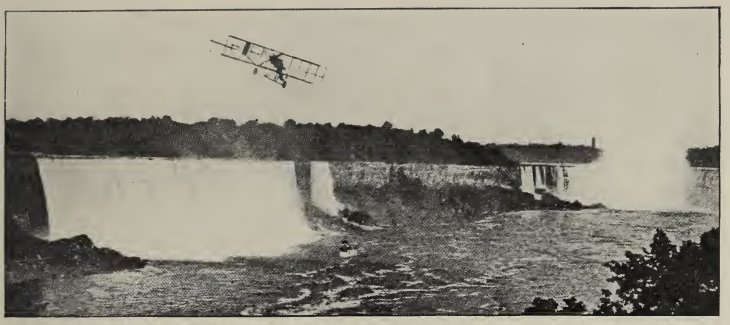
Hiram Maxim, in England, actually lifted into the air a machine weighing 7,000 pounds, carrying a steam engine and boiler of 300 horse-power, with fuel and three men. This demonstrated to every one that our engines were strong enough but that the important point to be solved was the stability of the machines.

Otto Lilienthal, of Germany, next attracted attention with his gliding machine. This was practically a dirigible parachute and the prototype of the modern glider common enough now. With this he made many flights from the top of high hills, and from his observations and experiments much was learned regarding the real nature of the problem of stability. Unfortunately, Lilienthal was killed through the breaking of his machine due to faulty construction.

The next development was made by Mr. Octave Chanute, of Chicago, who designed a much stronger glider, the prototype of the present biplane, and with his assistants made



LINCOLN BEACHEY



BEACHEY AT NIAGARA

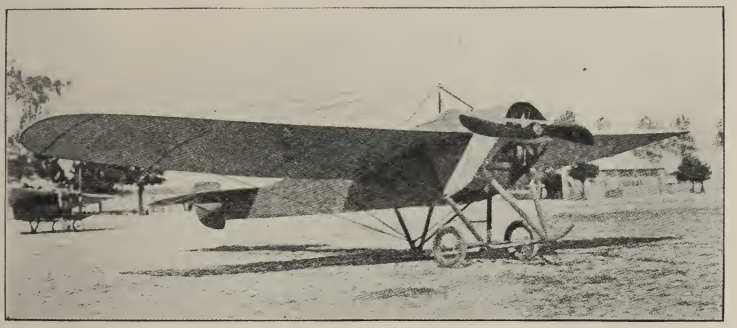
many successful glides. The late Mr. Chanute did much to help in the development of the art of flying and, more fortunate than Langley, he lived to see the success of the Wright Brothers and a large part of the present development. All of this work mentioned was done between 1885 and 1900.

At the beginning of the twentieth century, Professor Langley was working on a full-sized machine from the designs of his successful model which flew a mile over the Potomac River. This machine had following surfaces, so-called, i. e., it had two pairs of wings, one pair behind the other, while the Wright Brothers were working on a biplane glider which they developed into the power machine, with the success which is so well known. The Langley machine was never given a fair trial but was smashed at the first launching, owing to faulty launching gear, and the disappointment and the attitude taken by the public so affected Professor Langley that he died shortly afterwards.

The story of the Wright Brothers' work is now well known. They were the first to show just what position all of the surfaces must assume in order that stability shall be maintained. Every machine which flies has to adjust its controls according to the method first demonstrated by the Wright Brothers, although different machines use different mechanisms to produce this result.



EUGENE ELY



NIEUPORT MONOPLANE

Coincident with this work, the internal combustion engine had been improved through the development of the automobile, and this resulted in the remarkably rapid progress made in flying, particularly in France, where the gas engine has been developed to a high state of perfection. It would seem at the present time that the future of the flying machine is dependent upon the future of this motor. The flying machine was impossible before the material development due to the introduction of steam, but after this age of steam it was possible, through the work of six men, — Langley, Maxim, Lilienthal, Chanute, and the Wright Brothers.

Flying has reached its greatest development at present in France, largely because the gas engine has reached a high state of perfection there.

THE SAFETY OF FLYING

The layman looks upon flying as a very dangerous sport. He hears of all the accidents, but does not hear of all the cross-country flying without accidents which is going on now, particularly in Europe. Flying can be made as safe or as dangerous as the operator cares to make it. There are, in my opinion, three essentials to make flying safe. First, see that the machine is in perfect condition before leaving the ground. Second, do not go up in gusty winds. Third, keep



EARLE L. OVINGTON

over open ground or high enough to reach open ground should the engine stop. Safety in flight depends more upon the personal condition and experience of the operator, and his regard for the rules laid down above, than upon anything else, and for some years to come it will so depend. At the present time the public takes delight in daring exhibitions made by men who will risk their lives for glory and cash, and that sort of work is bound to produce accidents; but unfortunately the public does not see that these accidents are not inseparable from man-flight, but are solely the result of daring men taking extraordinary risks for the sake of thrilling the public.

It can be asserted that all of the accidents which have occurred in the air have been due to the carelessness or recklessness of the operator. He was either careless about the condition of his machine or he was reckless while in the air.

Flying is soon to become not uncommon. There will soon be no incentive to do tricks in the air, and then we will see the flying machine used sanely; and it will take its own peculiar place in our civilization, helping along our material progress and, let us hope, our moral progress also.



HARRY N. ATWOOD

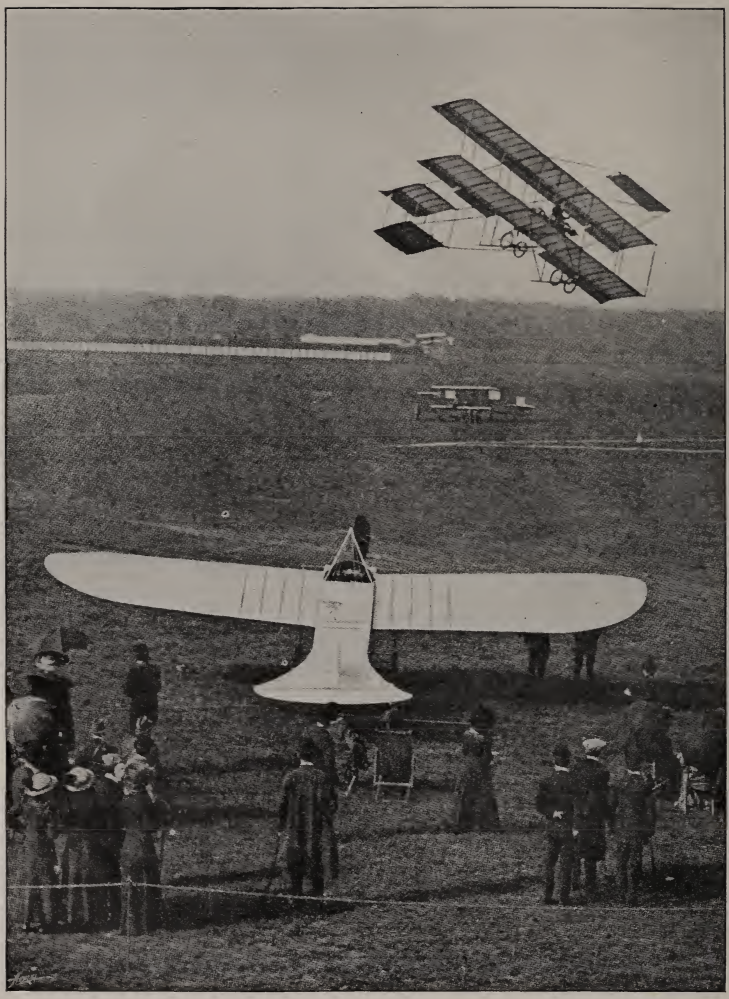


ATWOOD IN A BURGESS-WRIGHT

IMPORTANT EVENTS IN THE HISTORY OF FLIGHT

The first flight of a heavier than air machine carrying a man and under control of the operator was made on December 17, 1903, at Kitty Hawk, N. C., by Orville Wright. This flight was a short, straight flight against a wind of over twenty miles per hour.

From this date up to the year 1909 successful flights were made by the Wright Brothers, other experimenters making only short jumps. A short time before the year 1909 the method of control used by the Wrights became known and, using this method with some mechanical changes, flying began to make rapid progress, especially in France. At the end of 1909 the longest distance flown in one flight was 144 miles,



BLERIOT AND FARMAN MACHINES

by H. Farman. The next year that distance was increased to 362 miles, and now the record stands at 496.8 miles, made by Vedrines, August 9, 1911.

The altitude record has been raised from 350 feet, made December 18, 1908, by W. Wright, to 11,474 feet, made by Hoxie at Los Angeles, December, 1910. Within this time have occurred the remarkable flights of Bleriot across the English Channel, since duplicated many times; the flight of Chavez over the Alps; two great cross-country flights from France into Spain and into Italy, besides other remarkable flights in Europe and the great 1,000 mile flight around England, won by Beaumont. This latter flight is the most remarkable in most respects ever made, showing as it does the practical value of the flying machine as a means of transportation. Machines in Europe have made flights carrying passengers whose total weight was 1,300 pounds, and this means that in the near future flying machines having the capacity of a touring car will certainly be used.

The speed of the machine has been increased from twenty miles an hour to seventy-nine miles an hour, — the record held by Weyman on a Nieuport monoplane made in the last Gordon-Bennett race in England.

The breaking of previous records goes on apace, but we are approaching a limit. It is not probable any one will try to break the altitude record, as the gain is not worth the risk. Moreover, the speed record will be increased but slowly because at high speeds each increase means a great increase of power. The ability to carry many passengers will be increased, steadiness, safety, and ease of control will advance, and cross-country flights will become common

The day is not far off when exhibitions will give place to the commercial use of the machine as a sport and for carrying some mails and light freight.

For the past three years the machines have been subjected to the strains of fancy flying in the hands of nervy, albeit reckless, operators, and accidents have necessarily occurred. This has given the layman a false impression of the

dangers of flying. If a man were to drive a motor car fifty miles an hour over a plowed field, turning sharply to the right or left, he would certainly have an accident, and under such conditions we would rightly blame the driver and not the car. So it is in the air. Because the operator cannot see the air currents, the reckless ones treat the matter as if the road-bed was uniformly good, and they attempt maneuvers which under the conditions cannot be made safely; then comes the accident and the public holds flying to be dangerous.

It is this recklessness in flying which interests the public. But the public does not understand it is the operator that causes accidents, not the machine which kills the operator.

We need an era of sane flying to demonstrate the safety and pleasure of the sport, and when that comes the flying machine will develop and take its place beside the small yacht and the automobile.

Events



A Accuracy

B Bomb Dropping

C Cross-Country Flight

D Quick Starting

E Speed Contest

F Passenger-Carrying Speed

G Figure-Eight Speed

H Weight Carrying and Dropping

J Altitude Speed

K Exhibition Flying

Aviators

1	Harry N. Atwood,	Burgess-Wright biplane
2	Lincoln Beachey,	Curtis biplane
3	Claude Grahame-White,	Nieuport monoplane Grahame-White biplane*
4	Eugene Ely,	Curtis biplane
5	George W. Beatty,	Wright biplane
6	James V. Martin,	Farman biplane*
7	Thomas Sopwith,	Bleriot monoplane Wright biplane
8	Arthur Stone,	Queen monoplane
9	Maurice Tabuteau,	Morane-Borel monoplane
10	Charles J. Weyman,	Nieuport monoplane
11	Joseph S. Cummings,	Bleriot monoplane
12	George H. Mannor,	Burgess-Wright biplane
13	Earle L. Ovington,	Bleriot monoplane Curtis biplane
14	Clifford L. Webster,	Burgess-Wright biplane

* Built by the Burgess Co. & Curtis.

THE NATIONAL SHAWMUT BANK

OF BOSTON

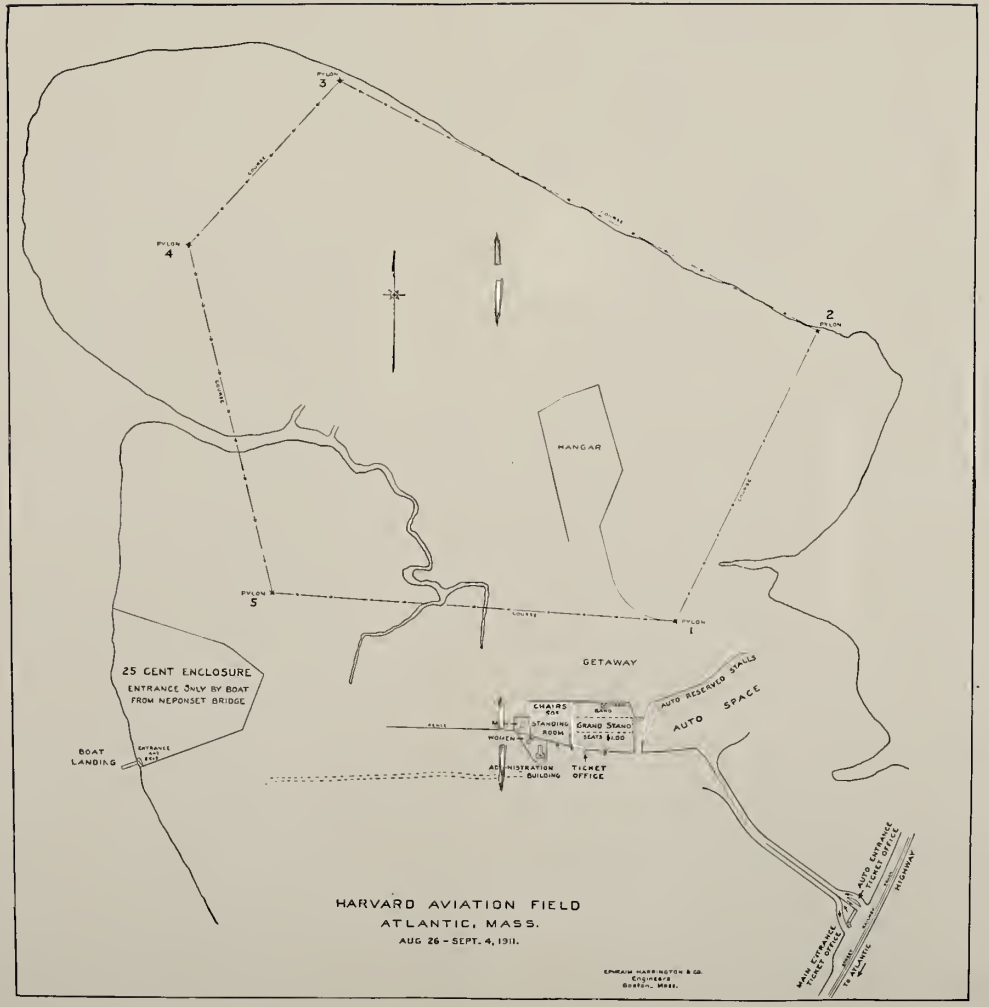


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TO ATLANTIC
HIGHWAY
HARVARD AVIATION FIELD
ATLANTIC, MASS.
AUG 26 - SEPT. 4, 1911.
EPHRAIM MARRINGTON & CO.
Engineers
Boston, Mass.

Kidder, Peabody & Co.

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LONDON

Program of Events



SATURDAY, AUGUST 26

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Quick Starting	$200	$150	$50	
3.30 P.M.	Speed, 8 laps to be run in heats, two in each heat. Winners of heat in final	500	300	150	$50
4.30 P.M.	Weight Carrying and Dropping	200	150	50	
5.00 P.M.	Altitude Speed	500	300	150	50
6.00 P.M.	Exhibition Flying				

MONDAY, AUGUST 28

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Accuracy	$200	$150	$50	
3.30 P.M.	Cross-Country	2,500	1,500	750	$250
4.00 P.M.	Quick Starting	200	150	50	
4.30 P.M.	Weight Carrying and Dropping	200	150	50	
5.00 P.M.	Altitude Speed	500	300	150	50
6.00 P.M.	Exhibition Flying				

TUESDAY, AUGUST 29

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Bomb Dropping	$200	$150	$50	
3.30 P.M.	Quick Starting	200	150	50	
4.00 P.M.	Figure-Eight Speed, 6 laps	300	200	100	
4.30 P.M.	Speed, 12 laps	500	300	150	$50
6.00 P.M.	Exhibition Flying				

WEDNESDAY, AUGUST 30

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Accuracy	$200	$150	$50	
3.30 P.M.	Quick Starting	200	150	50	
4.00 P.M.	Cross-Country	2,500	1,500	750	$250
4.30 P.M.	Weight Carrying and Dropping	200	150	50	
5.30 P.M.	Altitude Speed	500	300	150	50
6.00 P.M.	Exhibition Flying				



THE AIR-MAN

can lengthen
his hours of daylight
by soaring high into the sunlit spaces above.

On earth, however, the shadow of night closes in rapidly, and darkness comes deeper and earlier with each succeeding day.

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Investigate also your heating requirements, which may be most satisfactorily met by the use of gas log, gas fireplace or gas steam radiator.

Ask for the Commercial Department,
Telephone, Oxford 1690.

Boston Consolidated Gas Company, 24 West Street, Boston

PROGRAM OF EVENTS — Continued

THURSDAY, AUGUST 31

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Bomb Dropping	$200	$150	$50	
3.30 P.M.	Figure-Eight Speed, 6 laps	300	200	100	
4.00 P.M.	Passenger-Carrying Speed, 6 laps	500	300	150	$50
4.30 P.M.	Speed, 18 laps	500	300	150	50
6.00 P.M.	Exhibition Flying				

FRIDAY, SEPTEMBER 1

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Accuracy	$200	$150	$50	
3.30 P.M.	Quick Starting	200	150	50	
4.00 P.M.	Cross-Country	2,500	1,500	750	$250
5.30 P.M.	Altitude Speed	500	300	150	50
6.00 P.M.	Exhibition Flying				

SATURDAY, SEPTEMBER 2

Time	*Events*	*Total*	*First*	*Second*	*Third*
3.00 P.M.	Quick Starting	$200	$150	$50	
3.30 P.M.	Bomb Dropping	200	150	50	
4.00 P.M.	Cross-Country	2,500	1,500	750	$250
5.00 P.M.	Figure-Eight Speed, 10 laps	300	200	100	
6.00 P.M.	Exhibition Flying				

MONDAY, SEPTEMBER 4, LABOR DAY

Time	*Events*		*Total*	*First*	*Second*	*Third*
11.00 A.M.	Start of Inter-State Cross-Country Race for *Boston Globe* and other prizes	Monoplanes	$10,000	$7,500	$1,500	$1,000
		Biplanes	7,500	5,000	1,500	1,000
12.00 M.	Quick Starting		200	150	50	
2.00 P.M.	Bomb Dropping		200	150	50	
2.30 P.M.	Accuracy		200	150	50	
3.00 P.M.	Figure-Eight Speed, 14 laps		500	300	150	50
4.00 P.M.	Passenger-Carrying Speed, 12 laps		500	300	150	50
5.30 P.M.	Altitude Speed		500	300	150	50

The above contests will take place as near the hours set forth as conditions permit.



HARVARD AVIATION FIELD, 1910

THE FLYING LESSON



Atwood instructing a pupil

Burgess Company and Curtis Flying School

Squantum



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This
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¶ You can see that these figures (actual size) are large and easily readable — and there's one for every mile.

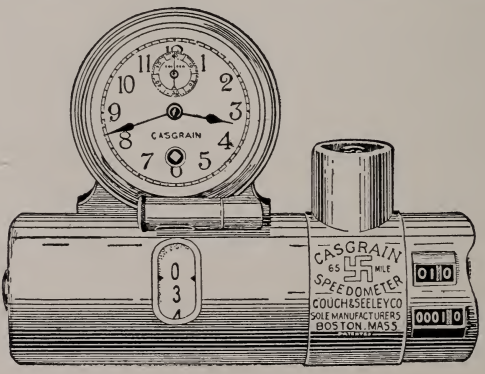
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8-day Chelsea Auto Clock, electric light.

Price $100

Musical Program

THE FIRST CORPS CADET BAND

JOHN B. FIELDING, *Bandmaster*

SATURDAY, AUGUST 26, 1911

1. MARCH. "Aviator" — *Fulton*
2. OVERTURE. "William Tell" — *Rossini*
3. SELECTION. "Girl of My Dreams" — *Hoschna*
4. CORNET POLKA. "New Creation" — *Fisher*
 Mr. E. A. FISHER
5. POPULAR SONGS OF THE DAY — *Remick*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. WALTZ. "Love and Spring" — *Von Blum*
8. "TONE PICTURES OF THE NORTH AND SOUTH" — *Bendix*
9. SELECTION. "Pink Lady" — *Caryll*
10. MARCH. "Monstrat Viam" — *Joy*

MONDAY, AUGUST 28, 1911

1. MARCH. "Gridiron King" — *Fletcher*
2. OVERTURE. "Orpheus" — *Offenbach*
3. SELECTION. "Belle of New York" — *Kerker*
4. PICCOLO SOLO. "The Lark" — *Demarre*
5. "CRÈME DE LA CRÈME" — *Tobani*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. WALTZ. "Espana" — *Waldteufel*
8. "REMINISCENCES OF ALL NATIONS" — *Godfrey*
9. SELECTION. "Chocolate Soldier" — *Strauss*
10. MARCH. "Front Section" — *Bagley*

Routes

BY AUTOMOBILE

Post Office to Aviation Grounds, Seven Miles

Federal Street to South Station. Left on Summer right around Station on Dorchester Avenue. Left on Adams Street into Neponset Avenue to Neponset Bridge. Cross Bridge, take first left, Atlantic Street, cross railroad on bridge, sharp left on Parkway, first left on street with trolley to grounds.

BY AUTOMOBILE

Harvard Bridge to Aviation Grounds, Seven One-Half Miles

Massachusetts Avenue via Edward Everett Square, bearing left on Parkway to right on Dorchester Avenue, left on Adams Street into Neponset Avenue to Bridge. Cross Bridge, take first left, Atlantic Street, cross railroad on bridge, sharp left on Parkway, first left on street with trolley to grounds.

BY TROLLEY AND ELEVATED TROLLEY

To Aviation Grounds Every Five or Ten Minutes

Route One, Forty Minutes

Post Office. Washington Street Subway to Dudley Street Transfer. Change. Neponset trolley to Neponset Bridge. Change. Trolley to grounds.

Route Two, Forty Minutes

Post Office. Trolley via Dorchester Avenue to Neponset Bridge. Change. Trolley to grounds.

Route Three, Forty Minutes

Back Bay from Massachusetts Avenue at Beacon Street. Dudley Street trolley to Transfer Station. Neponset trolley to Bridge. Change. Trolley to grounds.

BY TRAIN

From South Station to Atlantic and Trolley to Aviation Grounds — Frequently

Time: Boston to Aviation Grounds, fifteen minutes.

MUSICAL PROGRAM — Continued

TUESDAY, AUGUST 29, 1911

1. March. "Veritas" — *Densmore*
2. Overture. "Turandot" — *Lachner*
3. Selection. "Carmen" — *Bizet*
4. Trombone Solo. Selected
 Mr. R. A. Denel
5. Fantasie on "Old Kentucky Home" — *Dalbey*
6. (*a*) Popular Medley — *Remick*
 (*b*) **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. Selection. "Spring Maid" — *Reinhardt*
8. Waltz. "Wiener Blut" — *Strauss*
9. Selection. "Prince of Pilsen" — *Luders*
10. March. "74th Regiment" — *Losey*

WEDNESDAY, AUGUST 30, 1911

1. March. "Kaiser Friedrich" — *Friedmann*
2. Overture. "Semiramide" — *Rossini*
3. Gems of Grand Opera — *Moses*
4. Cornet Polka. "The Star" — *Levy*
 Mr. A. H. Fisher
5. Selection. "Madame Sherry" — *Hoschna*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. Ballet Music from "Faust" — *Gounod*
8. Selection. "Dollar Princess" — *Fall*
9. Waltz. "Badner Mädchen" — *Komzak*
10. March. "Up the Street" — *Morse*

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MUSICAL PROGRAM — Continued

THURSDAY, AUGUST 31, 1911

1. March. "Thunderer" — *Sousa*
2. Overture. "Zampa" — *Hérold*
3. Selection. "Faust" — *Gounod*
4. Piccolo Solo. "The Wren" — *Demarre*
 Mr. E. A. Franklin
5. "Scenes Pittoresques" — *Massenet*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. Selection. "Naughty Marietta" — *Herbert*
8. (*a*) "A Dance of the Hours" ("Gioconda") — *Ponchinelli*
 (*b*) "Polka Caprice" — *Perlet*
9. "Reminiscences of Ireland." — *Godfrey*
10. March. "2d Connecticut" — *Reeves*

FRIDAY, SEPTEMBER 1, 1911

1. March. "Ambassador" — *Bagley*
2. Overture. "Hungarian Lustspiel" — *Kela Bela*
3. Selection. "Aïda" — *Verdi*
4. Cornet Polka. "Zerlina" — *Levy*
 Mr. A. H. Fisher
5. Selection. "Mlle. Modiste" — *Herbert*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. Waltz. "Spring, Beautiful Spring" — *Lincke*
8. "Peer Gynt Suite" — *Greig*
9. Selection. "Robin Hood" — *De Koven*
10. March. "Our Director" — *Bigelow*



CURTIS BIPLANE, HARVARD AVIATION FIELD, 1910

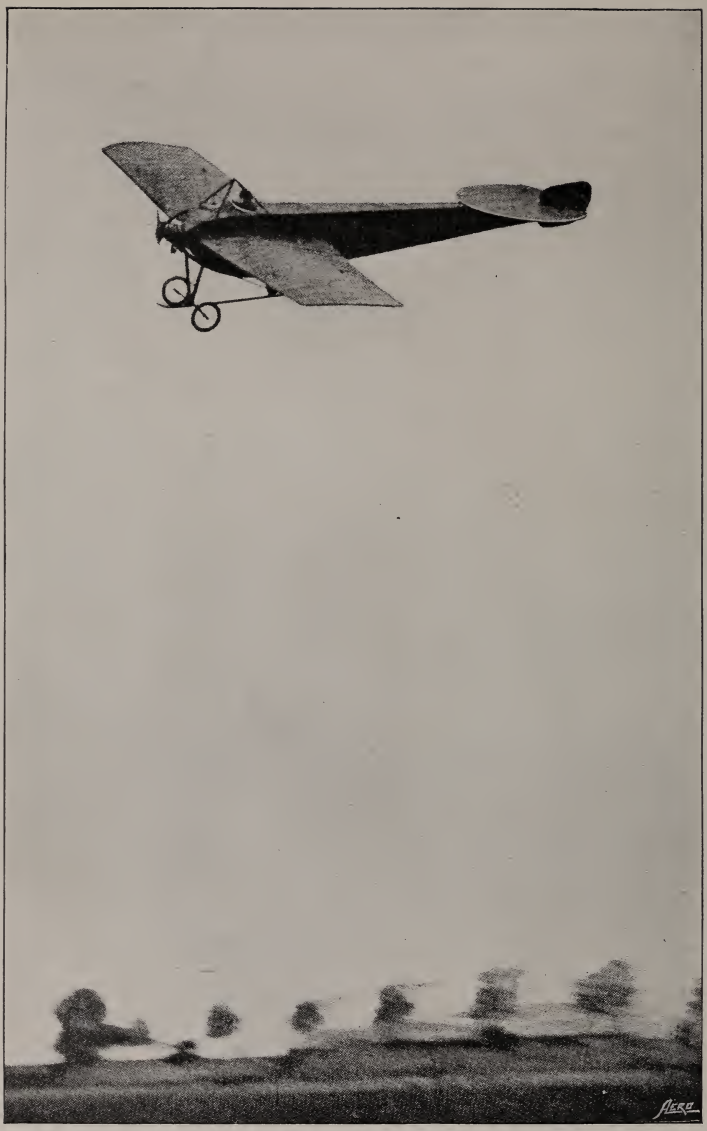
MUSICAL PROGRAM — Continued

SATURDAY, SEPTEMBER 2, 1911

1. MARCH. "Washington Post" — *Sousa*
2. OVERTURE. "Tannhäuser" — *Wagner*
3. "REMINISCENCES OF SCOTLAND" — *Godfrey*
4. SEXTET FROM "LUCIA" — *Donizetti*
5. SELECTION. "Girl in the Train" — *Fall*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. WALTZ. "Gold and Silver" — *Lehar*
8. MEDLEY OF WAR MELODIES — *Bendix*
9. SELECTION. "Algeria" — *Herbert*
10. MARCH. "Soldier's Field" — *Fletcher*

MONDAY, SEPTEMBER 4, 1911

1. MARCH. "Front Section" — *Bagley*
2. OVERTURE. "Barber of Seville" — *Rossini*
3. SELECTION. "English, Irish and Scotch Airs" — *Baltens*
4. CORNET POLKA. "The Whirlwind" — *Levy*
 Mr. A. H. FISHER
5. SELECTION. "Alma, Where do You Live?" — *Briguet*
6. **Harvard Aviation Meet Song, "In Aeroland"**
 (Written especially for the occasion)
7. WALTZES FROM THE "PINK LADY" — *Caryll*
8. SELECTION. "Sunny South" — *Lampe*
9. GRAND SELECTION. "Don Carlos" — *Verdi*
10. MARCH. "Turkish Imperial" — *Losey*



NIEUPORT MONOPLANE

Rules of the Contest Committee

The committee shall decide what contests if any shall not be held on any given day.

The hours for professional flying shall begin at 3.00 P.M. and shall terminate at 6.30 P.M., except in the long cross-country flight, which shall start September 4 at 11.00 A.M. and finish not later than 6.30 P.M.

The aviator's right to use the field and course for any purpose shall be determined after his notification reaches the committee, this right in all cases to be subject to the contest rules.

No aviator shall start in any event until permission is given by the committee.

Any competitor not starting within fifteen minutes of the time appointed shall lose his turn and shall then only be allowed to start at the discretion of the committee.

The course (1½ miles) is marked out by (5) pylons, and all competitors must pass outside such pylons when competing for any of the events; the pylons shall be deemed to have been passed when any portion of the machine shall have crossed the line passing through the pylon at right angles to the line of flight. For purpose of recording the distance traversed in any event, such distance shall be reckoned up to the last pylon properly passed by the competitor, and in all events where speed is the deciding factor the time shall be reckoned from the passing of the starting and finishing line in flight.

Any competitor touching any part of a pylon in the course of any event, or passing with any part of his machine over the pylon, shall not be held to have passed it and must return and pass the pylon in the proper manner, failing which his flight shall be held to have ended at the last pylon properly passed.

In all events machines must travel in the opposite direction to that of the hands of a clock (i. e., leaving the pylons on

their left hand), but it shall be within the power of the committee to authorize flights to be made in the reverse direction. Any competitor making a circuit or part of a circuit in the reverse direction without such permission is liable to suspension during the remainder of the meeting.

A competitor shall only pass another competitor on the outside (i. e., to the right of the competitor to be passed), and on no consideration whatsoever shall the overtaking machine be allowed to pass on the inside. The overtaking (faster traveling) competitor will be responsible that he keep clear of the overtaken competitor, and must, after having passed, keep at such a distance from the latter, whether outside, above, below, or in front, that the overtaken competitor may have undisturbed air to travel in. The committee are sole judges as to whether this rule has been complied with.

The committee have the right to prohibit any flying when, in their judgment, such flying is likely to be dangerous to the aviators or the public, and any aviator purposely flying over the audience or outside of the regular course, without the permission of the committee, will be penalized or disqualified at the discretion of the committee.

If, in the judgment of the committee, any aviator has violated these rules to the injury of any other aviator, he may be subjected to penalization or disqualification.

No competitor can be awarded more than one of any series of prizes; e. g., no winner of a First Prize can be awarded the Second or Third in the same contest. The number of prizes given in any actual contest shall be one less than the number of actual competitors.

All protests must be filed with the committee not later than twenty-four hours after the close of the event protested.

WEIGHT DROPPING

The object of this contest is to determine the ability of a machine to carry heavy weights and to drop them from a height without disturbing the stability of flight.

Bags of sand will be provided and the machine which can

carry up the greatest number of bags and drop the most sand at one time without losing its stability will win.

The bags must be dropped within a circle marked on the ground and the limits of altitude from which they are dropped will be set by the committee.

THE ACCURACY CONTEST

This contest is to determine the ability of an operator to land and stop nearest a fixed spot on the ground. The measurement shall be made as follows: The distances from the place of first touching the ground to the place of stopping and from the latter to the fixed spot shall be added together. This sum shall be the distance on which the prize is awarded, the shortest distance winning.

THE QUICK START CONTEST

This contest is for the purpose of determining the speed with which a machine can leave the ground after a given signal. Besides the operator, each machine shall be allowed one man for each propeller. The machine shall be properly placed on the get-away and the operator and assistants shall stand no nearer the machine than the tip of either wing. Upon the firing of a pistol the men shall go to the machine, start the engine, and the machine first off the ground and making an actual flight shall win. After the get-away the machines must fly once around the course. The time taken shall be from the pistol shot to the moment the machines fairly leave the ground.

RULES GOVERNING CROSS-COUNTRY FLIGHTS

In the cross-country flights, speed is the determining factor, but the speed shall be measured as follows:

Each machine and engine shall be at rest with operator and assistants in place and ready. The machines shall be dispatched one after the other by pistol shots and the elapsed time shall be computed from the pistol shots to the time of touching the ground at the next control.

RULES GOVERNING SPEED CONTEST

The speed contest shall be flown around the course of 1½ miles marked by five pylons. The aviator shall fly once around the course, and upon passing the starting line in the air his time will be taken.

He will then make the required number of laps of the course in the manner described under the general rules of the committee, and then upon crossing the starting line his time will be taken. He will then make another circuit of the course and land in the get-away. In case of necessity this contest shall be flown in heats, under rules to be fixed by the committee.

Rules governing passenger-carrying speed are the same as those governing the main speed contest, except that the passenger must not weigh less than 100 pounds.

RULES GOVERNING ALTITUDE SPEED

The aviator will start from the get-away and climb immediately, the only restriction being that he shall fly so that his altitude can be observed by means of instruments on the field during the duration allowed for the contest.

The aviator first reaching a height of 3,000 feet measured from the field wins. The time will be taken from his crossing the starting line.

RULES GOVERNING THE QUICK START

The machine shall be placed properly on the get-away with the engine still. Besides the aviator one assistant shall be allowed to each propeller. These men shall stand no nearer than the tip of either wing. At the firing of a pistol they will run to the machine, start the engine, and the man who first rises successfully into the air and circles the main course once shall win. The time shall be taken from the pistol shot to the time of leaving the ground.

RULES GOVERNING WEIGHT DROPPING

The bags of sand provided may be attached to the machine in any way the operator desires. The machine shall fly once around the course and drop the sand into a circle marked on the get-away. The altitude at the time must not be more than 100 feet nor less than 20 feet. The aviator dropping the greatest weight of sand shall win. In case two aviators drop the same weight the prize shall be given to the machine which, in the judgment of the committee, shows the greatest stability under the test.

RULES GOVERNING FIGURE-EIGHT SPEED CONTEST

The aviator shall rise from the get-away, fly once around the main course, cross the starting line, when his time will be taken, and then start the figure-eight course around pylon No. 1, leaving the pylon on his left. He will then go directly west to pylon No. 4, leaving that pylon on his right, back to the starting line, and repeat this figure the requisite number of times. On the last lap his time will be taken; he will then fly once around the main course and land in the get-away.

RULES GOVERNING ACCURACY CONTEST

The aviator shall fly once around the course and immediately land as close as possible to a marked spot. The distance from the point of first touching the ground to the point of stopping, and from the latter to the marked spot, shall be added together, and the shortest distance wins.

RULES GOVERNING BOMB DROPPING

The aviator shall fly once around the course and drop his bombs on a spot marked on the ground. Ten bombs will be allowed on each flight, and the average distance of these bombs from the fixed spot will be the basis on which the prize is awarded. The shortest average wins.

RULES GOVERNING EXHIBITION FLIGHTS

Exhibition flights shall take place at the hours specified in the program and shall consist of flying entirely within the limits of the field and in a direction contra-clockwise. These flights shall be paid for at the rate of $2 per minute of actual time in the air during the hours specified. If during these flights any aviator flies in a manner which shall be deemed by the committee dangerous to himself or others he shall lose all right to claim compensation for his flying.

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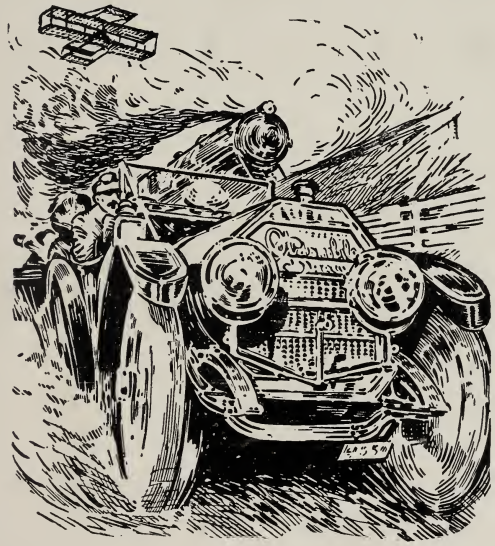
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